STATUS OF THE CLAIMS

1. (currently amended) A system, comprising:
   a) an MRI device, and
   b) software, wherein said software is configured to receive data obtained from said MRI device, wherein said data comprise at least one pair of consecutive in-phase and out-phase echos of a sample collected in magnitude format, wherein said software is further configured to process said at least one pair of consecutive in-phase and out-phase echos collected in magnitude format, wherein said processing comprises generating a percent of fat content within a sample, wherein said software is further configured to display said fat percentage within said sample.

2. (original) The system of Claim 1, wherein said sample is selected from the group consisting of a human head and neck, a human chest, a human abdomen, a human pelvis, and a human extremity.

3. (original) The system of Claim 1, wherein said sample is a human liver.

4. (original) The system of Claim 1, wherein said sample is abnormal tissue or lesion.

5. (original) The system of Claim 1, wherein said data obtained from said MRI device comprises:
   a) at least one image obtained with a low flip angle; and
   b) at least one image obtained with a high flip angle.

6. (original) The system of Claim 5, wherein said low flip angle setting is 20 degrees.

7. (original) The system of Claim 5, wherein said high flip angle setting is 70 degrees.

8. (original) The system of Claim 1, wherein said MRI device is configured to analyze a clinical pulse sequence, wherein said clinical pulse sequence comprises a corrected T2* NMR relaxation effect value, wherein said corrected T2* NMR relaxation effect value is obtained through processing consecutive in-phase sample echos or consecutive out-phase echos of said sample.

9. (original) The system of Claim 8, wherein said processing consecutive in-phase sample signals or consecutive out-phase signals of said sample comprises application of an equation selected from the group consisting of:

$Sin-phase\_T2*corrected = Sin-phase1 \bullet \sqrt{Sin-phase1/Sin-phase2}$; and
$Sin-phase\_T2*corrected = Sin-phase1 \bullet \sqrt{Sout-phase1/Sout-phase2}$; and
$Sout-phase\_T2*corrected = Sout-phase1 \bullet \sqrt{Sin-phase1/Sin-phase2}$; and
$Sout-phase\_T2*corrected = Sout-phase1 \bullet \sqrt{Sout-phase1/Sout-phase2}$.

10. (currently amended) A system, comprising software, wherein said software is configured to receive data obtained from a MRI imaging device, wherein said data comprise at least one pair of consecutive in-phase or out-phase echos of a sample collected in magnitude format, wherein said software is further configured to process said at least one pair of consecutive in-phase or out-phase echos collected in magnitude format, wherein said processing comprises generating a percent of fat content within a sample, wherein said software is further configured to display said fat percentage within said sample.

11. (original) The system of Claim 10, wherein said sample is selected from the group consisting of a human head and neck, human chest, a human abdomen, a human pelvis, and a human extremity.

12. (original) The system of Claim 10, wherein said sample is a human liver.

13. (original) The system of Claim 10, wherein said sample is abnormal tissue or lesion.

14. (original) The system of Claim 10, wherein said data obtained from said MRI device comprises:

a) at least one image obtained with a low flip angle; and

b) at least one image obtained with a high flip angle.

15. (original) The system of Claim 10, wherein said low flip angle setting is 20 degrees.

16. (original) The system of Claim 10, wherein said high flip angle setting is 70 degrees.

17. (original) The system of Claim 10, wherein said MRI imaging device is configured to analyze a clinical pulse sequence, wherein said clinical pulse sequence comprises a corrected T2* NMR relaxation effect value, wherein said corrected T2* NMR relaxation effect value is obtained through processing consecutive in-phase sample echos and consecutive out-phase echos of said sample.

18. (original) The system of Claim 15, wherein said processing consecutive in-phase sample signals and consecutive out-phase signals of said sample comprises application of an equation selected from the group consisting of:

$Sin-phase\_T2*corrected = Sin-phase1 \bullet \sqrt{Sin-phase1/Sin-phase2}$; and
$Sin-phase\_T2*corrected = Sin-phase1 \bullet \sqrt{Sout-phase1/Sout-phase2}$; and
$Sout-phase\_T2*corrected = Sout-phase1 \bullet \sqrt{Sin-phase1/Sin-phase2}$; and
$Sout-phase\_T2*corrected = Sout-phase1 \bullet \sqrt{Sout-phase1/Sout-phase2}$

19. (original) A method of generating a percentage of fat within a sample, comprising using the system of Claim 1.

20. (original) A method of generating a percentage of fat within a sample, comprising using the system of Claim 10.